

**ABSTRACT**

A method of debugging code that executes in a multithreaded processor having a microengines includes receiving a program instruction and an identification 5 representing a selected one of the microengines from a remote user interface connected to the processor pausing program execution in the threads executing in the selected microengine, inserting a breakpoint after a program instruction in the selected microengine that matches the 10 program instruction received from the remote user interface, resuming program execution in the selected microengine, executing a breakpoint routine if program execution in the selected microengine encounters the breakpoint and resuming program execution in the microengine.